# Commentary to support marking

Physics Sample C

SL & HL Internal Assessment May 2016

English

In the table below please provide a **short** commentary, maximum of 60 words per question/criteria, to justify the mark allocation to support workshop leaders using this sample in a workshop. Please do not refer to the candidate by name or number, or make comparison to other candidates as this document will need to be anonymised before uploading on the Workshop leader resource centre (WRC).

The commentaries are intended to support teachers’ understanding of assessment in this subject so that they can then develop other activities that assess understanding to the same standard.

Guidance for writing commentaries:

* Before writing comments read the subject report and grade descriptors for this subject. Comment should not contradict either of the documents.
* Explain why students missed/gained marks and the level of understanding that this demonstrated; useful language from the grade descriptors could be included.
* Highlight any common problems that need to be addressed by teachers

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| **Criterion** | **Mark** | **Out of** | **Justification** |
| **Personal**  **Engagement** | **2** | **2** | The personal engagement is nicely expressed in terms of interest, curiosity and in the level of initiative and personal input. The student was creative (in a straight forward way) in the design of the experimental method. |
| **Exploration** | **5** | **6** | A thorough understanding of the scientific context is expressed; the methodology is appropriate, and indeed novel for the student. The term ‘performance should be explained not as a “force” but rather a torque, as the equation shows. Angular ‘deceleration’ seems to be the student’s definition of performance, not force. The method illustrates an appropriate understand, however. |
| **Analysis** | **5** | **6** | Sufficient and relevant data has been collected; processing is appropriate and in line with the research question. Minimum and maximum gradient lines are, however, inappropriately constructed. Graph scales with zero-zero origin would help identify the appropriate trend line. Other analytical methods should have been attempted given the data. The best-fit assessment is someplace between 3 and 4 (different markbands); given the student’s ability to answer their research question, analysis earns a 5. |
| **Evaluation** | **5** | **6** | There is some relevant comparison to accepted theory. The theory alone justifies the hypothesis, however, and yet for an IA this investigation is very good. The conclusion is described and justified, and strengths and weakness are clearly understood. The last two indicator statements are very strong while the first two indicator statements are weaker; the best-fit method yields a 5 level of achievement here. |
| **Communications** | **3** | **4** | The text exceeds the recommended page limit mostly because the student writes too much; the small margins do not enhance the reading of the text. There are a few mistakes and errors, and inconsistencies in the terms performance. Letters for physical quantities are italicized but units should not be italicized. Communications is in the 3-4 markband but at the low end. |
| **Total:** | **20** | **24** |  |